



DEPARTMENT OF COMMERCE

National Institute of Standards and Technology

Prospective Grant of Exclusive Patent License

AGENCY: National Institute of Standards and Technology

ACTION: Notice of prospective grant of exclusive patent license.

SUMMARY: This is a notice in accordance with [35 U.S.C. 209\(e\)](#) and [37 CFR 404.7\(a\)\(1\)\(i\)](#) that the National Institute of Standards and Technology (“NIST”), U.S. Department of Commerce, is contemplating the grant of an exclusive license in the United States of America, its territories, possessions and commonwealths, to NIST's interest in the invention embodied in U.S. Patent No. 7,709,807 (Application No. 12/116,522), titled “Magneto-Optical Trap Ion Source,” NIST Docket No. 07-015 and U.S. Patent Application No. 13/369,008 titled “Charged Particle Source from a Photoionized Cold Atom Beam,” NIST Docket No. 11-018 to LoTIS Technologies LLC, having a place of business at 18026 Royal Bonnet Circle, Montgomery Village, Maryland 20886. The grant of the license would be for the field: Devices that produce or include a focused beam of electrons and/or ions.

FOR FURTHER INFORMATION CONTACT: Cathy Cohn, National Institute of Standards and Technology, Technology Partnerships Office, 100 Bureau Drive, Stop 2200, Gaithersburg, MD 20899, (301) 975-6691, cathleen.cohn@nist.gov.

SUPPLEMENTARY INFORMATION: The prospective exclusive license will be royalty bearing and will comply with the terms and conditions of [35 U.S.C. 209](#) and [37 CFR 404.7](#). The prospective exclusive license may be granted unless, within fifteen days from the date of this published Notice, NIST receives written evidence and argument which establish that the grant of the license would not be consistent with the requirements of [35 U.S.C. 209](#) and [37 CFR 404.7](#).

U.S. Patent No. 7,709,807 and U.S. Patent Application No. 13/369,008 are owned by the U.S. government, as represented by the Secretary of Commerce. U.S. Patent No. 7,709,807 describes a system and method for producing a source of ions, and particularly, a focused ion beam. The system and method use a magneto-optical trap (MOT) to produce a population of neutral atoms. A laser is then utilized to ionize atoms and produce a population of ions. An extraction element is then used to transfer the ions so that they can be used in a wide array of applications. U.S. Patent Application No. 13/369,008 describes a system for producing a charged particle beam from a photoionized cold atom beam. A vapor of neutral atoms is generated. From these atoms, an atom beam having axial and transverse velocity distributions controlled by the application of laser light is produced. The produced atom beam is spatially compressed along each transverse axis, thus reducing the cross-sectional area of the produced beam

and reducing a velocity spread of the produced beam along directions transverse to the beam's direction of propagation. Laser light is directed onto at least a portion of the neutral atoms in the atom beam, thereby producing ions and electrons. An electric field is generated at the location of the produced ions and electrons, thereby producing a beam of ions traveling in a first direction and electrons traveling in substantially the opposite direction. A vacuum chamber contains the atom beam, the ion beam and the electron beam.

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Willie E. May
Associate Director for Laboratory Programs

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